



MONTANA AERONAUTICS COMMISSION



Volume 15, No. 3

April, 1964

PLANS NEAR COMPLETION FOR NIFA '64 AIR MEET

Plans are very near completion for the National Intercollegiate Flying Association '64 Air Meet to be held in Bozeman, May 14, 15 and 16 and hosted by the Student Flying Co-op of Montana State College.

The meet will include the following events: Power on 180° Spot Landings, Power Off 180° Spot Landings, Bomb Drop and Navigation. The Queen contest will be held and the Ninety-Nines will present the 99 Achievement Award to a woman pilot participating in the meet.

Trophies will be presented to the top 5 teams and individuals. Permanent and rotating trophies are given to the 5 pilots in each event's top bracket and awards presented to the outstanding man and woman pilot; to the club flying the greatest number of air miles enroute to the meet and a safety award to the team showing the greatest amount of care in handling their aircraft. Mr. George Holey from the Minnesota Department of Aeronautics will be chief judge.

The Federal Aviation Agency will operate a control tower at Gallatin Field during the three days of the meet. Standard Oil Division of American Oil Company is providing some

800 gallons of fuel for the competition events.

On the social side — a barbeque will be held on Friday and will be served by the Montana Flying Farmers.

The Awards Banquet will be held on Saturday evening at 8:30 p.m. Mr. A. W. "Tony" LeVier, Director of Flying Operations for Lockheed will be the guest speaker and Mr. Ray Mertes, Director of School and College Service for United Airlines will be Master of Ceremonies.

The Co-op has been working hard to make this Montana meet a successful one and Wayne Sands, President of the Student Co-op states that many aviation minded persons, companies and agencies have been giving the group wonderful cooperation and assistance.

Operators and Airport Managers Meeting

The Montana Airport Management Association will have its annual meeting in Great Falls, on April 20. The meeting will be held in the Army and Marine Reserve Training Center on the Great Falls International Airport. A noon luncheon and an evening banquet will be held at Victor's Airport Cafe in the Terminal Building.

The program this year will consist

of panel discussions on operator leases; five-year airport plan; surplus equipment; soil cement construction; runway slurry seals, and reflective runway markers. There will be a tour of the new lighting system on the Great Falls International Airport conducted by Airport Manager, Tom Palmer, President of the MAMA. All Airport Managers, Airport Board Members, Flight Operators and Contractors, are urged to attend this meeting and it is suggested that they contact Tom Palmer for reservations.

The different agencies and organizations involved in the panel discussions will be the Asphalt Institute; The Portland Cement Association; Montana Aeronautics Commission; Federal Aviation Agency; Minnesota Mining and Manufacturing and Montana Aviation Trades Association, and Fred Steel Electrical Consultant.

The meeting session will begin at 9:00 A.M. and will continue until 5:00 P.M. The evening banquet will be held at 7:00 P.M.

This meeting promises to be one of the best held so far and it is felt that the mutual exchange of ideas on airport management, maintenance and operation will benefit the entire state.

If at first you do succeed, it's too easy; try something else.

MONTANA'S THIRD ANNUAL FLIGHT INSTRUCTORS REFRESHER COURSE COMPLETED



CLASSROOM SCENE

Nineteen Flight Instructors from throughout the state completed a 10-day Flight Instructors Refresher Course on March 11.

The Course, held in Great Falls, March 2 through March 11 was sponsored by the Montana Aeronautics Commission and the Montana Aviation Trades Ass'n. The Ground School instructors for the course included specialists from the FAA Academy in Oklahoma City, FAA personnel from ATC, RAPCON and the SAGE Center in Great Falls and the United States Weather Bureau, Great Falls and Helena. The Ground School, held in the conference rooms of the O'Haire Manor, presented refresher training in the latest Air Traffic Control Procedures, Flight Maneuvers, Instruments, Weather and Psychology of Training. The afternoons were spent in actual flight instruction and operated out of Homer Holman's Skyways, Inc., on the International Airport. Mr. Holman was Co-ordinator for the Montana Aviation Trades Association for the Course. One evening was spent in a tour of the SAGE CENTER arranged through Mr. Charles Irwin, Center Chief, which was thoroughly enjoyed by the Trainees and Instructors. Jack Wilson, Safety and Education Officer for the Montana Aeronautics Commission was Course Manager.

Trainees were: Rolan T. Albright, Roundup; Albert F. Bergmann, Great

Falls; Thomas Brenden, Jr., Scobey; William M. Dunlap, Billings; Kenneth G. Enghusen, Conrad; Tom Herrod, Billings; Gus S. Johnson, Havre; William F. Jones, White Sulphur Springs; James D. Klaue, Great Falls; Ora F. Lohse, Valier; Elwood W. (Swede) Nelson, Missoula; Ralph Nichols, Dillon; J. Norris Owen, Geraldine; Eugene R. Poncelet, Great Falls; Richard H. Potter, Missoula; Joseph Rogers, Great Falls; Richard C. Thomas, Billings; Clifford V. Thomsen, Culbertson; George A. Wetherell, White Sulphur Springs.

Instructors on the Course from the FAA Academy at Oklahoma City, Oklahoma were: Richard J. "Dick" Munroe presenting Psychology of Training; Samuel A. Lewis presenting Instruments and Neal Whitten presenting Flight Maneuvers.



FAA Academy specialists — Neal Whitten, Dick Munroe and Sam Lewis.

Great Falls FAA personnel instructed in Air Traffic Control were:

Loren Foot, Chief of RAPCON; Lee Ward, Chief of Flight Service Station; Glen Kittelson, Proficiency Development Officer ARTC SAGE Center and Bernard Majerus, Chief of the Great Falls Tower.

"Weather" was presented by: R. A. "Dick" Dightman, Meteorologist in Charge and Montana's Aviation Liaison Officer, U. S. Weather Bureau located at Helena. From Great Falls Weather Bureau were: Harry Elser, Flight Services Quality Control Officer; Arthur Jacobson, Principal FAWS Forecaster; Arthur Rozett and Warren Harding, FAWS Forecasters.

Supervising the Flight portion were: Fritz Lueneburg, Supervising Inspector at the FAA GADO, Billings and Arthur Kurth, Safety Inspector at Helena FAA's GADO.

Assisted by 9 Flight Instructors-graduates of '62-'63 courses: Alfred Hardy, Plentywood; James W. Kruger, Cut Bank; Al Newby, Flight Line Inc., Belgrade; David Stradley, Gallatin Flying Service, Belgrade; Bruce Toole, Lynch Flying Service, Billings; Robert H. Lohof and Monte E. McCann, Severson Air Activities, Great Falls; Paul Tilleman, Livingston Flying Service, Livingston, and Jack Archibald, Glacier View Skyways Inc., Kalispell.



Mr. Lloyd Young, FAA Kansas City and Montana Aeronautics Commissioner Ted Cogswell.

The Course was observed by Mr. Clifford Skoog, General Operations Branch, Flight Standards Division, Kansas City; Mr. Peter Meier, Resident ATC Specialist, Rapid City, South Dakota, and Mr. Lloyd Young, Chief of General Aviation Branch, Flight Standards Division, Central Region, Kansas City.

The 19 Instructor Trainees received their Montana Aeronautics Commission "Wings" at a banquet held at Victor's in the Administration Building on International Airport,

Official Monthly Publication
of the
**MONTANA AERONAUTICS
COMMISSION**

Box 1698
Helena, Montana

Tim Babcock, Governor

Charles A. Lynch, Director

Herb Jungemann, Chairman
Gordon Hickman, Vice Chairman
Walter Hope, Secretary
E. B. Cogswell, Member
Clarence R. Anthony, Member
Carl W. (Bill) Bell, Member
Jack R. Hughes, Member



DIRECTOR'S COLUMN

IN MEMORIUM
JACK J. ELDERKIN
1922 - 1964

ROBERT HODGE
1929 - 1964

Butte Aero Sales & Service
Butte, Montana

Mrs. Elderkin will continue to operate Butte Aero Sales and Service recently purchased from Jay and Bert Mooney. Mr. Harold L. "Hal" French will be Manager.

The Montana Aeronautics Commission wishes Mrs. Elderkin every success in her operation.

Airport Division Reaches One Hundredth Project

Libby, the County Seat of Lincoln County and Northwestern Montana, has the honor of becoming the 100th Airport project that the Montana Aeronautics Commission has been involved in since the inception of the Airport Development program in 1957. Libby's project is in the planning stage for the development of a new airport.

The Montana Aeronautics Commission's first project was the reconstruction of the Plentywood Airport in northeastern Montana in Sheridan County. The Plentywood project was initiated in September, 1957 and was the beginning of the MAC's loan program. At that time

an airport loan was limited to a total of \$10,000.00 repayable in a five year period. Later in the program, this loan limit was increased to \$50,000.00 for a five year period, then in November of 1961 the policy was changed and the limits increased and Glasgow received the first ten year \$100,000.00 loan. The policy still remains so that the Aeronautics Commission can loan an Airport Board an amount not to exceed \$100,000.00 on any one project and repayable over a ten year period at no interest.

The Airport Division's first 100 projects have consisted of a wide variety of airport development. The projects are not limited to only airport construction, but MAC assistance can be given on any project that will pertain directly to the improvement of any public airport. The projects have consisted of loaning money to Airport Boards for the purchase of snow removal equipment, hanger construction, seal coating runways, the building of new runways, the reconstructing of old runways; airport terminal buildings; runway/taxiway lights; airport water systems; airport shops; border crossing airstrips; General Aviation Airports; VFR Airports; Air Carrier Airports; the purchasing of land for runway extension; airplane aprons; preliminary engineering grants, and many others. The size of different projects within our airport development program has ranged from a \$10,000.00 turf runway up to the \$1,300,000.00 new air carrier airport at West Yellowstone.

Of the 100 projects completed in the last seven years, 50 of these have been initiated in the last two years. If this is any indication of progress and an increasing popularity of the airport program, the MAC hopes to complete its 200th project in 1966.

Some airports have had as many as four projects in which the Aeronautics Commission has become involved, however, there are still 48 public airports in Montana that have not received any Commission engineering grants or airport improvement loans. They have, however, benefited from the MAC's technical assistance through field inspections and Airport Board coordinating. The five year projected airport development program from 1946 to 1969 shows that the 48 public airports just mentioned, will possibly be involved in a State program of one kind or another.

The Montana Aeronautics Commission takes this opportunity to thank the many individuals, the Airport Commissioners and the Flight Operators that have worked with, and assisted us in the initiation of the first 100 projects.

MAC feels that it is very fitting that the 100th project was reached during Montana's Centennial year.

F & E PROJECTS

The following information has been received under date of March 10, 1964 from the Federal Aviation Agency in Kansas City, Missouri, as prepared by the program management staff.

Among the numerous modifications and installations covered in the release there is projected for Chalk Buttes, Montana, a VORTAC to be established with the VOR Section to be commissioned in January, 1965, the TACAN section scheduled for December 1966. Among the various VORTAC conversions of existing VOR's there is included as the proposed dates for the TACAN commissioning as follows:

Butte, Montana, January 1965.

Cut Bank, Montana, November 1964.

Great Falls, Montana, May 1964.

Helena, Montana, October 1964.

Lewistown, Montana, June 1964.

Missoula, Montana, October 1964.

Whitehall, Montana, June 1964.

On a project to relocate the ATC Tower the release lists Great Falls, Montana, with an estimated completion date for March of 1966.

The proposal to establish VHS/-UHF-DF facilities, has, as of March 10, been delayed on the following installations:

Bozeman — Cut Bank — Lewistown — Miles City and Missoula. A final determination of the location of the VORTAC in the vicinity of Chalk Buttes, Montana, has not as yet been made. It will however, be located within a five nautical mile radius of latitude 45° 23'30" North and longitude 104° 14' West.

DID YOU KNOW THAT: A rhumb line is a line between two points which makes the same angle with each meridian. If a pilot followed a rhumb line, he would head his plane in a certain direction at the start and he would keep it headed in this same direction over the entire course.



John Nordhagen, MATA President, Master of Ceremonies for the banquet, speaking to the group: (lt. to rt.) Homer Holman, Dorothy Holman, Jack Hughes, Nordhagen, Lloyd Young, Jack Wilson, Course Manager and the Commission's office manager, Marge Davis.



Flight Instructors (lt. to rt.), front row, Monte McCann, Jim Kruger, Jack Archibald, Al Hardy. Back row, Paul Tilleman, Bob Lohoff, Dave Stradley, Bruce Toole and Al Newby.

Wednesday evening. The banquet arrangements were handled by Mr. Homer Holman and his wife Dorothy. The 74 persons attending included: course participants, wives, featured guests and Montana Aeronautics Commission Members and staff.

The main speaker of the evening was Mr. Pat Lee, CGF public relations director for the College of Great Falls. Mr. Lloyd Young from the Central Region Office of the FAA spoke to the group and highly complimented the Montana Aeronautics Commission and the Montana Aviation Trades Association for the presentation of the Course.

Mr. John O. Nordhagen, President of the Montana Aviation Trades Association served as Master of Ceremonies. Mr. Wilson, Course Manager, presented Certificates to the Instructors of the Ground and Flight Schools and Mr. Jack Hughes, Commission Member, presented the Certificates of Merit and the "wings" to the Trainees for completion of the Course. The "wings" were pinned on the trainees by their wives and Mrs. Marge Davis, Montana Aeronautics Commission Office Manager did the honors for those whose wives were unable to attend.



Montana Aeronautics Commissioner, Jack Hughes presenting the Certificates and Wings to the 19 Trainees. President of the Montana Aviation Trades Association, John Nordhagen looks on.

NEW RULES FOR AIR TAXI

A new regulation incorporating major revisions of the certification and operation standards for air taxi operators has been issued by the Federal Aviation Agency.

The regulation, which also covers commercial operators of small aircraft (under 12,500 pounds), becomes effective September 7, 1964, as new Part 135 of the Federal Aviation Regulations.

Air taxi operators were subject for years to provisions applicable to small aircraft under Part 42 of the Civil Air Regulations, which was developed originally to regulate the nonscheduled airline industry. General dissatisfaction with this arrangement prompted governmental action to draft separate rules for large and small commercial aircraft. The new regulation is a result of this effort as was a revision of Part 42 which limited its applicability to supplemental airlines and commercial operators of large aircraft.

Major provisions of Part 135 not included in previous regulations governing air taxi operators or commercial operators of small aircraft are:

1. An instrument rating for the pilot and basic IFR instrumentation for the aircraft are required when passengers are carried in VFR night operations and certain VFR "over the top" operations. Instrument capability is considered essential to the safe conduct of these operations because of the increased possibility of

inadvertently encountering adverse weather conditions.

2. Limited IFR operations with passengers in single-engine airplanes are permitted provided certain conditions are met. These include a requirement for a "buffer" zone of VFR weather beneath the weather ceiling to permit an emergency descent or landing in case of unforeseen circumstances.

3. Use of an autopilot system in lieu of a second pilot for IFR operations is permitted subject to certain limitations needed for safety. FAA flight tests have shown this equipment to be of considerable assistance to the pilot, giving him relief from actual flying while he tends to navigational planning, communications and other flight tasks.

The tests also showed that safe and efficient use of autopilots in small aircraft depends greatly on the pilots' familiarity with the equipment. Consequently each pilot/aircraft/autopilot combination must be individually demonstrated and approved by an FAA inspector before being used in air taxi IFR operations. This provision will enable the Agency to exercise careful and intimate control over autopilot use by those operators who are authorized to employ the equipment.

4. Limited IFR passenger operations without a second pilot or automatic pilot also are permitted under special conditions. For example, when marginal VFR conditions are encountered en route and reports and forecasts indicate the pilot will be able to return to VFR at least 15 miles before reaching the destination airport.

FAA believes that it is safer to permit limited IFR operations by a qualified pilot flying alone than it is for him to fly under minimum VFR conditions with the resulting potential hazard of collision with other aircraft, ground obstacles, or rising terrain.

In addition to these provisions, Part 135 establishes minimum certificate requirements for co-pilots and recent experience requirements for pilot-in-command of small multi-engine aircraft. It also establishes criteria for issuance of company check pilot authorization, up-dates oxygen requirements, and increases radio equipment requirements for IFR, VFR "over-the-top" and VFR night operations.



CALENDAR

April 8: Helena—Montana Aeronautics Commission's monthly meeting.

April 8: Helena—Bid opening on Lincoln Airport Development.

April 20: Great Falls—Montana Airport Managers Association Annual Meeting.

April 28 and 29: St. Paul, Minnesota—Aviation Education Officers Regional NASAO Meeting.

May 1, 2 and 3: Billings—Montana Pilot's Association Annual Convention. Montana Centennial is the theme. MPA members—Don't Miss It.

May 8 and 9: Great Falls—Flying Farmers will meet! Queen Coronation will be held at the O'Haire Manor the evening of March 8. The present Queen, Scotty Jones will crown the new Queen, Mrs. Henry Wood of Gildford. Mary Jo Janey, Supervisor of Aviation Education for the Montana Aeronautics Commission will be guest speaker. Registration will be held in the Terminal Building at the International Airport.

May 14, 15 and 16: Bozeman—National Intercollegiate Flying Association Meet. (See Article)

May 24-27: Detroit, Michigan—American Association of Airport Executives.

June 5 and 6: Minneapolis, Minnesota—Centennial Fly-In. Have you answered your questionnaire?

June 14: Lewistown—Willy Rimby's Skycraft will hold an Aircraft Auction. The auction will be conducted by Frank Bass, Montana's Flying Auctioneer and will be held at the Lewistown Municipal Airport.

June 15-26: Dillon, Western Montana College of Education—Ground Instructors Course.

June 16-July 17: Missoula, Montana State University: Teachers Aero-Space Education Workshop.

June 16-July 17: Bozeman—Montana State College — Teachers Aero-Space Education Workshop.

June 19, 20 and 21: Columbus—Centennial Celebration and Fly-In. Free Barbeque at noon on Saturday, Parade, Rodeo, Boat and Car

Races. See May issue for further details.

June 25, 26 and 27: Washington, D.C.—National Aero-Space Education Conference.

June 29-July 17: Dillon—Western Montana College of Education—Teachers Aero-Space Education Workshop.

July 11 and 12: INAC Summer Board Meeting — Many Glacier Hotel — Glacier National Park.

July 26: Bozeman—General Fly-In and Antique Aircraft Fly-In—Sponsored by the Optomist Club of Bozeman. Mark your calendar now!! A real family day. Al Newby will present his acrobatic air show in Nelson Story's Great Lakes Trainer and parachute jumps will be made by members of the MSC Sky Divers. Watch your Newsletter for further details.

August 1 and 2: Moose Creek Dude Ranch—35 miles west of Hamilton, Montana. 4-State Fly-In — Oregon, Idaho, Washington and Montana Pilots Associations are firming up their plans. This should be a family must for this summer. Barbeque and Camp-Out. (Watch for further details.)

September 24, 25 and 26: Helena—INAC Annual Convention. (See article)

October 12, 13 and 14: Rapid City, South Dakota — NASAO National meeting.

October 19, 20 and 21: Norman, Oklahoma—National Airports Conference to be held at the University of Oklahoma. It is jointly sponsored by the University and the American Association of Airport Executives.

JOE FLYNN NEW HELENA HANGAR PRESIDENT

At its annual meeting February 29th, the Helena Hangar of the Montana Pilot's Association elected Joe Flynn President for the coming year. Kermit W. Anderson was elected Vice-President and Clarence Sullivan was re-elected Secretary-Treasurer. Outgoing President Fred Naegle officiated at the meeting and MPA President, Russ Lukens spoke on the upcoming, 4-State, Fly-In to be held in August and the upcoming annual MPA Convention in Billings, May 1st, 2nd and 3rd.

YOU AND YOUR INSTRUMENT RATING

Eddie M. Granger

The world of ILS, ADF and Radar can be your gateway to greater aircraft utilization. Each of us who has passed through this corridor of learning and has been given our instrument rating often times remember, through some occurrence, information given to us long ago by our instrument flight instructor.

So you pride yourself on knowing your exact location at all times while "on-the-gauges"? With a hypothetical incident—let us review a point of learning given to every instrument student in regards to time-distance or dead reckoning.

A pilot was IFR Miles City to Great Falls via V-120. He knew his plane well, had a weather briefing prior to departure, and had performed the normal pre-flight planning. His Lewistown estimate had to be revised once by four minutes. With this revised estimate confirmed by station passage over Lewistown he knew that he had his ground speed determined within a few knots.

Thinking he was twenty miles out from Great Falls, he started working Great Falls Center for the ILS approach he desired. His request was "Great Falls Center, this Bellanca 410C, presently 20KM out on V-120 at 10,000 ft., estimating Great Falls at :30, request ILS to Great Falls International." Center replied "Roger your DME fix, contact Great Falls Approach Control on 118.1 now." After making contact with Approach Control our pilot was instructed to descend to and maintain 6,200, turn left heading 240°. Pilot's answer was "Roger Great Falls Approach Control, this is Bellanca 410C out of 10,000 at 21, turning left heading 240°."

At this point our pilot turned his VHF receiver to the ILS, his ADF to the outer marker, and congratulated himself on his apparently accurate estimate for, after all, wasn't it so accurate that the center thought he had DME aboard? He settled back with the satisfaction of knowing that everything was going like clockwork. He was on radar, no more estimates to worry about, and he did not have a thing to do 'till the 'ol ILS needle started to center.

He glanced at his altimeter which was passing through 8,300 and he

reported, "Great Falls Approach Control, Bellanca 410C steady on 240°, altitude 8,300 ft., descending."

Approach Control's reply was one which our pilot will never forget. "Bellanca 410C, this Great Falls Approach Control, climb to 11,000 ft., turn right heading 271°, report passing through 10,000 ft. for positive radar identification."

In this instance the pilot was a victim of three circumstances. The first was in assuming he was 20KM out from Great Falls when actually he was 35KM out, due to the strong headwind he had picked up since leaving Lewistown. His second mistake was in accepting Centers answer of "Roger your DME fix." He should have corrected this immediately by advising Center that he was not DME equipped and should then have requested an identifying turn. The third circumstance which really made the other two tie together as far as Great Falls Approach was concerned, was the position of a VFR Cessna 210 which was 20KM out from Great Falls in the exact position the Bellanca reported himself to be in. This pilot left Great Falls having learned a point he will never forget.



FEDERAL AVIATION AGENCY LISTING

Airport	Apr.	May	June
Bozeman	16	14	11
(Gallatin Field)			
Culbertson	8		3
Glasgow		13	
Glendive			10
Great Falls	9	7	4
(International)			
Havre	7		
(City-County)			
Lewistown		27	
Miles City	22		
Missoula	23	21	18
(Missoula County)			
Sidney		6	
(Richland County)			

FOR SALE: 1947 Ercoupe 85 h.p. VHF Omni and LF. 450 hours on Chrome major. 2 years on fabric wings. Good glass. Excellent tires, fair interior. D.G. T.B. R.C., last periodic January, 1964. Call or write Phil Ward, S-S Motel, Livingston, Montana. Phone 222-2082 after 8:00 P.M.

FOR SALE: 1947 Stinson Voyager 108-1,150 Franklin, Met-L Prop, Rotating Beacon, Motorola LF, 1600 TT, 600 SMOH, Licensed to 1-1-65. Write Robert Noll, 507 Locust, Anaconda, Montana, or call 563-6429. Priced at \$2600 or trade on other plane.

These days you'd better think twice before promising a girl the moon.

CONGRATULATIONS!



CERTIFICATES ISSUED RECENTLY TO MONTANA FLYERS

Newman, Alvin Willet—Plentywood—Private
Newton, Shirley E.—Glasgow—Student
Scott, Richard Dean—Glasgow AFB—Student
Jensen, Kathleen J.—Redstone—Private
Cridland, Clarence R.—Miles City—Student
Norris, Philip W.—Glasgow AFB—Student
Lobdell, Donald—Wolf Point—Student
Rasmussen, Norman William—Culbertson—Pwr. Plt. on Mech.
Riemann, Dormann D.—Glendive—Student
Brown, John Thomas—Red Lodge—Student
Farnes, Gary Nicholas—Billings—Student
Carter, Curtis Dan—Miles City—Student
Lawrence, Robert B.—Billings—Private
Billmeyer, John Richard—Hogeland—Private
Petrik, Jerome T., Jr.—Sidney—Private
Acton, Philip J.—Westby—Flt. Instr.
Skovgaard, Dennis Ray—Lewistown—Student
Houser, Lester Earl—Billings—Student
Houck, Albert C.—Glendive—Instr. on Private
Olson, Jack Dean—Billings—Student
Green, Ralph E.—Bozeman—Comm.
Turk, Jack L.—Mississippi—Comm.
Klevmoen, Bruce G.—Billings—Student
Thomas, David Richard—Billings—Student
Payne, Ronald Keith—Billings—Private
Miles, Charles Wilbourn—Miles City—Student
Miller, Joseph Paul—Miles City—Student

Noyes, Alan Walworth—Fairview—
Student
Turner, Patricia Anne—Sidney—
Student
Chabot, Paul J.—Scobey—Student
Pyle, Donald Loring—Miles City—
Student
McEwan, Weston L.—Billings—
Ground Instr. AGI IGA
Udelhoven, Andrew Martin—
Winifred—Student
Bolstad, Donald E.—Homestead—
Student
Zerbe, Otto—Lustre—Student
Halverson, Paul E.—Billings—
Private
Ellis, Marcia S.—Great Falls—
Student
Todd, Larry L.—Pray—Student
Black, Thomas J.—Great Falls—
Com. ASMEL
Lutz, Stephen D.—Denver—Comm.
Kude, Alfred L.—Helena—Private
Smith, Dwight P.—Missoula—
Parachute Rigger
Black, Hugh M.—Butte—Student
McLaughlin, Hugh A.—Helena—
Student
Kvande, Trygve M.—Havre—Private
Wagner, Marlin E.—Great Falls—
AMEL on private
Ellston, Carl J.—Cut Bank—Student
Lovell, Virgil L.—Anaconda—
Student
McKnight, William S.—Butte—
Student
Tvaruzek, Darrell Dean—Havre—
Student
Tracy, Gordon M.—Anaconda—Instr.
rating (Mil. Comp)
Swanson, Robert L.—Great Falls—
Private
Evans, Cecil R.—Warm Springs—
Student
Kiihn, Donald G.—Cut Bank—
Student
Walden, Jo Ann—Great Falls—
Student
Stroup, John R.—Belgrade—Student
Sinclair, John L.—Edmonton, Alta.
—Special Purpose Pilot
Flick, Robert E.—Dutton—Student
Power, Donald W.—Great Falls—
Student
Donald, John H.—Butte—Student
Foster, John Hudson—Great Falls—
Student
Wagner, Carol L.—Great Falls—
Student
Whitney, Robert B.—Great Falls—
Student
McDonald, Wm. B.—Newberg,
Oregon—Com. Instr. (Mil Comp)
Danielson, Richard L.—Butte—
Student

Larson, Lawrence I.—Missoula—
Private
Hansen, Kenneth R.—Missoula—
Private
Forslan, Carl A.—Great Falls—Instr.
on Com
Andersch, Frederick J., Jr.—Great
Falls—Student
Bidwell, James Francis J.—Bozeman
—Student
Payne, Dorothy M.—Great Falls—
Student
Patrick, Larry D.—Rudyard—
Student
Dean, Loren R.—Butte—Student
Torgerson, Sidney A.—Bozeman—
Private
Blair, David E.—Great Falls—
Student
Benjamin, Newell J., Jr.—Milwaukee,
Wis.—Student

A CASE IN POINT

By Kenneth D. Beyer
Commission Attorney

VFR PILOT—vs—ATC

Section 60.19: Requiring pilots entering ATC airport to comply with ATC instructions is a general regulation and applies to VFR flights as well as IFR flights.

Administrator's order suspending Pilot's private pilot's certificate for 30 days was reversed by the Hearing Examiner. On appeal, the CAB ruled that the Examiner had interpreted the law incorrectly and sent the case down to the Examiner to further examine witnesses to determine if a violation of 60.19 had occurred. (There was a dispute as to what instructions had in fact been given to pilot by ATC therefore no facts were included in the decision.)

The Examiner's opinion reversed here, had held that a VFR pilot was not subject to ATC instructions holding that the ATC instructions applied only to IFR flight.

The CAB in reversing the Examiner's opinion held that:

1. Part 60 is divided into three parts, General Flight Rules (GFR); Visual Flight Rules (VFR) and Instrument Flight Rules (IFR). That Section 60.19 is found under the GFR rather than the IFR section; therefore, it applies to VFR flights as well as to IFR flights.
2. The Examiner who relied upon the ANC Manual, third edition, was incorrect because it was

cancelled and superseded by the Air Traffic Control Procedures, ATM-2-A effective November 1, 1960.

3. Even if the ANC manual were in effect, the Examiner had incorrectly interpreted that manual.

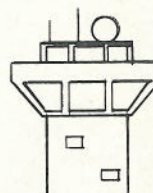
Therefore, the rule shall be that a VFR Pilot who fails to comply with instruction from ATC has violated Section 60.19 and by violating Section 60.19 has accordingly violated Section 60.12 (Careless or Reckless Operation.)

HALABY vs LINDSAY — Order
Serial No. S-1231

Author's Note:

Section 60.2 Provides: **AUTHORITY OF PILOT**

The pilot in command of the aircraft shall be directly responsible for its operation and shall have final authority as to the operation of the aircraft. In emergency situations which require immediate decision and action the pilot may deviate from the rules prescribed in this part to the extent required by consideration of safety. When such emergency authority is exercised, the pilot upon request of the administrator shall file a written report of such deviation. In an emergency situation which results in no deviation from the rules prescribed in this Part but which requires Air Traffic Control to give priority to an aircraft, the pilot of such aircraft shall make a report within 48 hours of such emergency situation to the nearest regional office of the administrator.



TOWER

OPERATIONS

MONTANA TOWER-CONTROLLED AIRPORT OPERATIONS

FEBRUARY, 1964

	Total Operations	Instrument Operations
Billings	6692	719
Great Falls	6628	762
Missoula	3583	265
Helena	1904	143

The modern American needs more brains to fill out the income tax form than to earn the income.

Survey Discloses Optimum Size Short-Haul Transport

A modern 20-passenger, twin-engine aircraft will give the 13 local service carriers in the United States the most favorable operating results in meeting short-haul requirements for the increasing volume of passenger traffic forecast for the 1970's.

This aircraft could have a market potential in the U. S. local service carrier industry alone of 303 to 482 units by 1975.

These and related conclusions were delivered today to the Federal Aviation Agency in an interim report by the Systems Analysis and Research Corporation (SARC), Washington, D. C. as part of an economic analysis of the short-haul transport.

A number of meetings have been scheduled by the FAA to take place during the next several weeks in which representatives of the Association of Local Transport Airlines (ALTA), SARC, airframe manufacturers, FAA and other groups will discuss the interim report and other aspects of the short-haul transport program.

The technical Committee of ALTA met with FAA and a meeting with the entire ALTA membership met during the organization's spring meeting in San Juan on April 2-3. On April 9 the airframe and engine manufacturers will meet with the Agency.

A final report, due in October, will deal with all potential markets for the aircraft, including those represented by U. S. and foreign airlines, general aviation and military aviation.

The study was made to determine the optimum size aircraft to serve low density local service markets—which represent the bulk of the local passenger market. This objective assumed the higher density markets would be served by a 40-passenger aircraft or larger.

FAA is promoting the development of a safe, reliable and economic short-haul transport as a replacement for the DC-3. To activate the program, the Agency issued a Request for Proposals (RFP) in December 1963 inviting U. S. airframe manufacturers to bid on contracts for designing such an aircraft. The

RFP stated that FAA planned to pick three manufacturers to produce detailed design specification under contracts of \$100,000 each. To further move the program along, the Agency contracted with the Systems Analysis and Research Corporation to survey domestic and world markets for a new short-haul transport.

Early this year, Marion Maxfield, an aircraft executive with extensive experience in the industry was retained by FAA Administrator N. E. Halaby to serve as consultant to FAA's Associate Administrator for Development, Robert J. Shank, to implement the program.

The SARC report states that a 20-passenger aircraft will provide the best relationship between the lines' operating revenues and operating costs.

"It will minimize operating losses or will maximize operating profits to a greater extent than any other size aircraft of smaller or greater seating capacity operated in the secondary markets of the local carriers," the report said.

Estimates for the 1975 passenger traffic market indicate that 62 percent of total local service traffic will be in the light density areas of the nation. SARC states these passengers will be most economically served by aircraft of less than 40-passenger capacity.

During this same period, eight of the 13 local service carriers will derive 80 percent of their customers from the low density market. This market will be best served by an aircraft with a seating capacity of 20 or less, according to SARC.

New-Pilot's Correspondence Course

Thomas "Tom" Herrod, Billings, well known aviation personality in Montana has recently completed the compiling and copyrighting of a Pilot's Correspondence Course. The Course is designated for private pilots and also recurrent pilot's training. The text is based on and includes the Federal Aviation Agency's Private Pilot's Handbook of Knowledge; the AOPA's 360° Rating Course and the AOPA's NAVCOM Course. It contains 33 Study Guides and 15 Multiple Choice Examinations.

The Course has a suggested sys-

tem of study—Chapter by Chapter study then the student should complete the study guide exam. At the end of each section you complete the multiple choice examination, using the answer sheets which are then sent to Mr. Herrod. The sheets are graded and returned with an evaluation and explanation of each question that has been missed and an area of review suggested.

The price of the Course will be \$58.00 complete. Dealers are presently being arranged for around the state and the Course will be available from Montana Operators.

INAC ANNUAL CONVENTION

Hugh R. "Bud" Kelleher, INAC President and Airport Manager at Helena, reports that members of the Board of Directors of the International Northwest Aviation Council met in Spokane, Washington, early in March and set up the final plans for the Council's Annual Convention which will be held in Helena, Montana, September 24th, 25th and 26th.

The Holiday Motel and the Holiday Inn will be the "hub" for the convention. Registration will begin on Thursday, the 24th from 1:00 to 9:00 p.m.

The Delegates will participate in the dedication of Helena's new FAA Office building at the Helena Airport.

Friday an awards breakfast will be held at 8:30 a.m. and official sessions will begin at 10:00 a.m.

A variety of interesting panel discussions will be held including "Air-lines Plans for the INAC Area, General Aviation, State Directors of Aeronautics and Airport Management, and a number of excellent speakers and panel members have been arranged for.

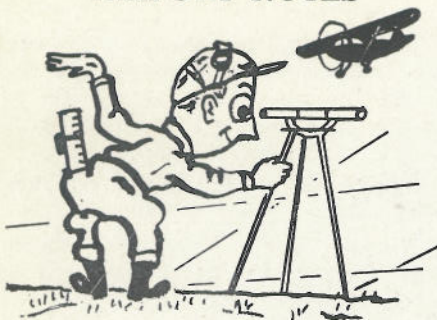
The Canadian Night Banquet is programmed for 7:00 p.m. on Friday evening and the U. S. Night Annual Banquet at 7:00 on Saturday night.

(Watch the newsletter for further details on this very important annual convention.)

FOR SALE: Aeronca Champion—115 Lycoming with Lyons mount—rebuilt and recovered Dec., 1958—always hangared—licensed for standard and restricted category—with or without Sorenson sprayer, as sprayer used on only 300 acres one season. Contact Ken Youngquist, Skyway Television. Phone 485-3950, Circle, Montana.

Temper is the offspring of limited intelligence.

AIRPORT NOTES



By James H. Monger
Assistant Director, Airports

On March 16, ground-breaking ceremonies were conducted at the Helena Airport for the new Federal Aviation Agency office building. The first shovels full of dirt were turned by Mayor John Schroeder and Chairman of Lewis and Clark County Commissioners, Harry Byrne. The Airport Board stated that this building will be an excellent new addition to the Helena Airport. The office building will contain approximately 4,000 square feet, and total building cost will be \$85,000.00. The Montana Aeronautics Commission loaned the \$85,000.00 to the Helena Joint City-County Airport Board for a ten year period at no interest. The loan repayment will be made from office rentals paid to the Airport Board by the FAA. Construction will be completed September 15, 1964.

Branches of the FAA to occupy the building will be the District Airport Engineer, who is now located in an office building in downtown Helena, the General Aviation District Office and the Systems Maintenance Sector Offices. The GADO and the SMS are presently located in extremely cramped quarters in the existing Administration Building.

Ekalaka bids were opened on March 18 for the construction of a new General Aviation Utility Airport at Ekalaka. Only one bid was received, that of Wickens Brothers of Suffolk, Montana, for a total contract price of \$19,774.00. The Montana Aeronautics Commission has requested that the Board of Examiners accept this bid as it came in approximately \$2500 less than the engineering estimate. Completion date for this project is July 1, 1964.

Lincoln bids will be opened for the construction of the new Lincoln VFR Airport, in Helena at the State Capitol Building at 10 a.m. on April 8.



Mayor Schroeder and Harry Byrne, Chairman of Lewis and Clark County Commissioners prepare to "turn" the first shovels. (Lt. to Rt.) Hugh Kelleher, Airport Manager; Al Gaskell, County Commission member; The Mayor; Joe Flynn, Airport Board member; Byrne; Wally Wadell, Contractor; James H. Monger, Montana Aeronautics Commission and Ed Lamb, County Commissioner. (Missing from the photograph is Lee McKindree, architect.)

Completion date for this airport project will be August 1, 1964. This MAC-FAA project will consist of a 4,000 foot by 75 foot bituminous runway, with an aircraft parking apron.

Choteau—A loan in the amount of \$25,588.56 has been approved by the MAC to the Choteau Airport Commission. This ten year loan will be used to match Federal funds in a reconstruction project on the Choteau Airport. The project will consist of lengthening and paving the runway and paving a new taxiway and apron. The project will start upon approval of the Teton County Commissioners.

Ryegate/Richey — Engineering is now underway on General Aviation Airports for Ryegate and Richey. These projects are sponsored by Golden Valley and Dawson Counties.

AIRPORT MANAGERS please return your **5 YEAR PLAN** questionnaire form to the MAC as soon as possible. We are now compiling the information into its final form and an early return will be appreciated. Thus far only 30% have been returned. Write in all items that are planned even though they are not yet budgeted.

AIRPORT DIRECTORY. The new 1964 Airport Directory for Montana has been mailed to each registered pilot in the state. We have received

many favorable comments on the new Directory, the pilots seem to enjoy the steel snap type binder over the last year's model, plastic binder. The new Directory will be revised approximately every six months and new revision sheets will be mailed to each registered pilot. We sincerely solicit any suggestions that you would have on ways to improve the Directory, and should you note any discrepancies, please inform this office.



New MAC Directory

FOR SALE OR TRADE: Very clean. Cessna 150, full panel with Narco Superhomer. Contact Tom Westall, Dillon Flying Service, Dillon, Montana, Box 979, or call 683-9769.

FOR SALE: 140 Cessna—or trade on 170. Wing covered in 1963, red and white and polished aluminum. Low freq. radio, 670 SMOH, dual brakes, good glass and interior, 850 by 6 tires. \$1995.00. Dr. J. L. Cromwell, Box 420, Livingston, Montana.

VFR EXAM-O-GRAM NO. 21

FLYING INTO UNFAVORABLE WEATHER

How many times have you overheard or perhaps made similar statements yourself—"Let's go, we don't need weather, we'll make it okay." All too often a departing pilot merely glances at or completely ignores weather reports and forecasts because of a biased opinion that "weathermen never hit it right anyway." True, ceiling and visibility reports are sometimes estimated and a forecast is for conditions likely to occur; but if you don't utilize this information, your flight may be full of unhappy surprises. Accident investigation statistics continue to reveal "flight into unfavorable weather" as the chief cause of VFR fatal accidents. Results of FAA written examinations confirm that many pilots lack an adequate understanding of weather information.

Why do pilots fly into unfavorable weather?

1. **GO-ITUS**—"I gotta get there . . ."; "I don't have time to wait." This is a condition that usually converts **HOT PILOTS** into **COLD BODIES**, and is a most difficult "disease" to cure. This attitude can be controlled only through sound reasoning and judgment by the individual.

2. **Misinterpretation of forecasts and reports**—"It looks like VFR . . ."; "aw, it's good enough." Applicant performance on FAA written examinations indicate that the problem lies not in reading the data, but in knowing just what it means in terms of expected weather conditions.

3. **Failure to keep abreast of weather changes**—Weather conditions do change, and the best way to keep informed en route is to listen to in-flight advisories and scheduled broadcasts 15 and 45 minutes past each hour.

4. **Ignoring in-flight weather signs**—"It's just a little shower . . ."; "Just a few puffs of clouds." Rarely does weather suddenly go bad with no warning. Signs of deteriorating weather should be learned and observed by the VFR pilot.

Are you "weather wise" or other-wise? Does a station report of VFR ceiling mean en-route VFR? NO, the ceiling reported is the height above

the reporting point only. It must also be related to the surrounding and en-route terrain to determine if adequate VFR separation can be maintained between stations. Additionally, un-reported conditions between stations may be lower than those reported at the stations.

Is reported visibility the same as visibility aloft? NO, the reported visibility is the visibility at the surface only. Conditions aloft may restrict flight visibility more or less than that reported. Cockpit visibility in precipitation is further reduced by rain, drizzle, or snow spreading over the windshield. Forward visibility in a light snowfall may be zero due to the relative horizontal movement of the snow. Sunlight reflecting off haze or dust aloft reduces the visibility considerably.

What can be learned from temperature reports? High temperatures reduce takeoff and landing performance. Low temperatures reflect the approximate freezing level and the areas of possible icing in precipitation. Sudden temperature changes reveal the relative position of a front and its associated weather.

What is the significance of dew point? Specifically, a dew point value relatively close (2° - 5°) to the air temperature is indicative of the probability of fog, low clouds, or precipitation.

Why should the reported wind data be noted? The velocity and direction of the surface wind should be related to the runway at the point of intended landing to determine the degree of cross wind. Wind data also reflects the degree of turbulence to expect. A sudden shift in direction often reveals the position of frontal weather relative to a station.

Of what value is the altimeter setting? Correct cruising altitudes and adequate vertical clearance are dependent on the application of altimeter settings. A rapid and continual drop in pressure (altimeter setting) forewarns of approaching inclement weather.

What is a PIREP and where is it found? A PIREP is a report of weather conditions at flight altitude, particularly between stations, seen by the pilot instead of the ground observer. Reports are often broadcast, and a pilot report summary is disseminated hourly to stations by teletype. Cloud base and top reports are

found in the Remarks section of sequence reports.

Are you getting the real picture from forecasts and reports? Only when the above are considered in analyzing forecasts and reports will you have the full story.

What are some of the weather signposts and their warnings?

Blowing Dust — turbulence, poor visibility at low levels, particularly into the sun.

Low Layer of Haze—possible fog or stratus cloud in early morning or late evening; poor visibility, particularly into the sun.

Light Puffs of Clouds at Low Levels — probable fog or stratus cloud, particularly in early morning or late evening.

Ragged Cloud Base — Turbulence, erratic visibility, possible precipitation.

Bulbous Cloud Base — Turbulence, possible precipitation conducive to **TORNADOES**.

Roll-Type Clouds — **DANGEROUS** turbulence, dust and poor visibility, hazardous landing conditions, subsequent precipitation.

Line of Heavy Dark Clouds—**SEVERE** turbulence, dust and poor visibility, hazardous landing conditions, precipitation, hail.

Opening in Wall of Dark Clouds (SUCKER HOLE) — **DANGEROUS** turbulence, possible precipitation and poor visibility as the hole is entered.

Gradual Lowering and Thickening of the Ceiling — Inadequate terrain clearance, possible widespread precipitation, and fog.

Near Freezing Temperature—Poor visibility in precipitation with ice forming on the windshield as well as the aircraft structure.

THE 180° TURN IS AVIATION'S BEST SAFETY DEVICE—IF USED PRIOR TO BEING ENVELOPED BY ADVERSE WEATHER. DON'T BE A "PUSHER" IN THE HOPE THAT THE WEATHER WILL GET BETTER!

DID YOU KNOW THAT: The ionosphere is the region of ionized air which reflect radio waves back to the earth so that transmission beyond a horizon is possible. It acts somewhat like a great mirror bouncing back the radio waves to the earth.

KLM CHARTER FLIGHT RETURNS



Ready to check through, "What Interesting Looking Packages!"

The Montana Aeronautics Commission's Hangar was the scene of much activity on Sunday, March 22, as 86, tired but happy persons arrived from the KLM Chartered Ski Flight to Germany. All agreed that it was a fabulous trip from departure on the 29th of February until touch down on March 22.

Customs and Immigration officials were on hand as the passengers arrived and Custom procedures were handled in Hangar No. 1.



Reverend Robert J. Hartman, Helena, checks through with Customs Official Dave Hannant.

NEED

Don't lose your head
To save a minute
You need your head
Your brain is in it.

JEPPSEN ANNOUNCES NEW GROUND SCHOOL TEACHING SYSTEM

Denver-based Jeppesen & Co. continues to make aviation news with the introduction of their new Visual Instruction System, called VIS. Termed, by E. B. Jeppesen, as a "real breakthrough in ground training," the new system combines three proven learning/teaching methods into one flexible teaching system. The new VIS is designed for use with the Jeppesen programmed ground school courses, including Private Pilot, Commercial and Instrument . . . and can be used equally well by ground schools, flying clubs and all other study groups, large or small. With the use of a new type "overhead" projector, and large 8"x10" transparencies, the new system can be adapted to any instructor's favorite teaching method.

"The new Jeppesen VIS system," says E. B. Jeppesen, "will make every ground school instructor's job easier, faster . . . and his students will learn faster and more thoroughly. Real progress has been made in the area of teaching, with the new programmed ground school methods. Students are learning difficult subjects like meteorology and navigation much easier and faster than ever before. And, they're remembering their subject longer. This, of course, makes for better, safer pilots. Now,

this new VIS system enables ground school instructors to take full advantage of the new "programmed" methods . . . and at the same time, retain their own individual teaching styles."

The new low-cost Jeppesen VIS system is available through Jeppesen distributors nationwide.

Special Procedures For Operators of No-Radio Crop Duster Aircraft

If a pilot desires authorization to operate without radio into a Federal Aviation Agency (FAA) tower-controlled airport, and is unable to contact the tower controlling such airport by local telephone or interphone, he may file a request for such authorization with the nearest FAA flight service station (FSS), or tower if there is no collocated FSS. The request shall include the following information:

- a. Aircraft identification and type.
- b. Pilot's name.
- c. Departure point and destination airport.
- d. Proposed time and date of arrival.

The request will be forwarded via FAA circuits to the destination airport tower for action. The request will either be approved or disapproved based on local airport management rules and the traffic situation anticipated at the proposed time of arrival. An answer will be transmitted to the originating FAA facility for delivery to the pilot.

Approved requests will include any necessary special instructions, and disapprovals will include the reason therefor. Where traffic is the basis for disapproval, an alternate arrival time will be suggested. An authorization will be invalid if the aircraft does not arrive within thirty minutes before or after the proposed arrival time.

HOW ABOUT THAT

A young wife went to visit her mother for a week and left several notes around the house for her husband. One in the coffee can reminded him of her love. Another on the TV reminded him of some errand to do. But, the one he found among his white shirts brought him up short. It read: "Where do you think you're going that you need a white shirt?"

**AVAILABLE
PUBLICATIONS & AIDS
MONTANA AERONAUTICAL
CHART—\$1.00 Retail Price**

**MONTANA AIRPORT
DIRECTORIES—\$2.00 Retail Price**

**CLOUD CHARTS
(for give-away distribution)
FREE**

**GENERAL AVIATION
OPERATORS**

**DENSITY ALTITUDE CHARTS
FREE**

**FLIGHT PLAN POSTERS
FREE**

FIXED BASE OPERATOR WANTED: For immediate occupancy! 150 feet x 160 feet Storage Hangar, 60 feet x 50 feet Shop, Office space available in Administration Building. Second housing available on Airport. Call or write Cut Bank Airport Commission, Cut Bank, Montana. Phone 938-2537 or 938-2039 after 6:00 P.M.

'SAFE PILOT'S GOLDEN RULE'

1. CHECK-OUT

Plan ahead so that you never attempt to exercise the privilege of your pilot certificate in any aircraft unless checked out by well qualified instructor and have successfully completed a minimum of:

- (a) One hour ground familiarization with controls systems and aircraft operating limitations.
- (b) Eight regular take-offs and landings (day or night)
- (c) Two cross-wind take-offs and landings.
- (d) Two short field take-offs and landings.
- (e) Repeat above if no recent experience in this model. (6 months).

HEAR ABOUT—The Ag Pilot who lost control of his aircraft and collided with a telephone pole. When he came to his senses he was on the ground, clutching telephone wires. "Thank Goodness", he murmured, "It's a Harp"!

DID YOU KNOW THAT:

FORCE is that which tends to alter the uniform motion (or rest) of a body.

Work is done when a force moves its point of application.

Energy is the ability to do work.

Velocity is speed in a given direction.

Acceleration is rate of increase of velocity.

Pressure is stated as force per unit area.

DID YOU KNOW THAT: A four-legged animal riding in a plane would not have the same difficulties as man for the major blood vessels in man, as in other animals, run from head to the posterior region. Thus the blood is quite easily forced away from the head and upper parts of the body in man. The blood of a four-legged animal would be forced toward the ventral surface, but not away from the head.

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE:—"To foster aviation as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in **research, development, and advancement of aviation**; to develop uniform aviation laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."

**P. O. Box 1698
Helena, Montana
Return Postage Guaranteed**

**U. S. POSTAGE
PAID
HELENA, MONT.
Permit No. 2**

